

CLAIMS

1. A polynucleotide comprising at least 17 contiguous nucleotides from the 26-nucleotide sequence of SEQ ID NO: 1.
- 5 2. A polynucleotide according to claim 1 comprising at least 18 contiguous nucleotides from the 26-nucleotide sequence of SEQ ID NO: 1.
3. A polynucleotide according to claim 1 comprising at least 20 contiguous
10 nucleotides from the 26-nucleotide sequence of SEQ ID NO: 1.
4. A polynucleotide according to claim 1 comprising the sequence of SEQ ID NO: 1.
5. A polynucleotide comprising at least 17 contiguous nucleotides from the 26-
15 nucleotide sequence of SEQ ID NO: 2.
6. A polynucleotide according to claim 5 comprising at least 18 contiguous nucleotides from the 26-nucleotide sequence of SEQ ID NO: 2.
- 20 7. A polynucleotide according to claim 5 comprising at least 20 contiguous nucleotides from the 26-nucleotide sequence of SEQ ID NO: 2.
8. A polynucleotide according to claim 5 comprising the sequence of SEQ ID NO: 2.
- 25 9. A polynucleotide according to any of the preceding claims comprising the sequence of SEQ ID NO: 21.
10. An insect resistant plant comprising a VIP3A protein and a polynucleotide according to any of claims 1 to 9.
- 30 11. A plant according to claim 10 which is a cotton plant.

12. An insecticidal cotton plant according to claim 11 which is derived from the COT102 event.
13. A method of detecting plant material derived from the COT102 event comprising:
- 5 • obtaining a sample for analysis;
 - providing DNA from the sample;
 - providing a pair of primers designed to bind to a polynucleotide as claimed in claims 1 to 9 when said polynucleotide is single stranded;
 - 10 • amplifying the region which lies between the sites at which the primers bind; and
 - detecting the presence of the amplification product;
- whereby the presence of the amplification product is indicative that the sample is derived from the COT102 event.
- 15 14. A method according to claim 13 wherein the first primer has the sequence of SEQ ID NO: 3 and the second primer has the sequence of SEQ ID NO: 4.
15. A method of detecting plant material derived from the COT102 event comprising:
- 20 • obtaining a sample for analysis;
 - providing a probe designed to bind to the complement of a polynucleotide as claimed in claims 1 to 9 when said polynucleotide is single stranded;
 - hybridising said probe with the sample; and
 - detecting whether the probe has hybridised;
- whereby the hybridisation of the probe is indicative that the sample is derived from the COT102 event.
- 25 16. A method according to claim 15 wherein the sequence of the probe is selected from the group comprising SEQ ID NO: 5, SEQ ID NO: 6 and SEQ ID NO: 7.
- 30 17. A method according to claims 15 or 16 wherein the probe hybridises to the sample under stringent hybridisation conditions.
18. A method of detecting plant material derived from the COT102 event comprising:

- obtaining a sample for analysis;
- providing an antibody designed to bind to a VIP protein contained within a plant according to claims 10 to 12;
- incubating said antibody with the sample; and
- 5 • detecting whether the antibody has bound;

whereby the presence of antibody which has bound is indicative that the sample is derived from the COT102 event.

19. A method of detecting plant material derived from the COT102 event comprising:

- 10 • obtaining a sample for analysis;
- making a protein extract of the sample;
- providing a test strip designed to detect the presence of a VIP protein present within the sample;
- incubating the test strip with the sample; and
- 15 • detecting whether VIP protein is present;

wherein the presence of VIP protein is indicative that the sample is derived from the COT102 event.

20. A method according to claim 18 or 19 wherein the VIP protein has the sequence of
20 SEQ ID NO: 8.

21. A method of detecting plant material derived from the COT102 event comprising:

- obtaining a sample for analysis;
- subjecting one or more insects of the species *Spodoptera frugiperda* to the
25 sample;
- subjecting one or more insects of species *Ostrinia nubilalis* to the sample as a control;
- detecting whether the sample has an insecticidal effect on insects from each species; and
- 30 • comparing the results with an authentic COT102 bioassay profile.

22. A kit of parts comprising a means for detecting the presence in a sample of plant material derived from the COT102 event.
23. A kit of parts according to claim 22 comprising a means for detecting the presence
5 in a sample of a polynucleotide according to claims 1 to 9, or a protein encoded by a polynucleotide according to claims 1 to 9, or a VIP protein.
24. A kit of parts according to claims 22 or 23 comprising in the form of instructions
10 one or more of the methods according to claims 13 to 21.